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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,150	08/28/2003	Mark Rule	25040-0717	7074
29052	7590	10/12/2004	EXAMINER	
SUTHERLAND ASBILL & BRENNAN LLP			BOYKIN, TERRESSA M	
999 PEACHTREE STREET, N.E.			ART UNIT	
ATLANTA, GA 30309			PAPER NUMBER	
			1711	

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/650,150	Applicant(s) RULE ET AL.	
	Examiner Terressa M. Boykin	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-40 are rejected under 35 U.S.C. 102(e) as being anticipated by USP 6709746 see abstract, cols. 1-4, Table 1 and Table 11.

Applicants' claims are directed to a method of reducing the amount of acetaldehyde in a melt-processed polyester having vinyl ester end groups, wherein the method comprises incorporating into the polyester at least one active vinyl ester transesterification catalyst for catalyzing conversion of the vinyl ester end groups to acetaldehyde, heating the polyester, and providing egress for the acetaldehyde from the polyester.

With regard to applicants' claims 1, 2, 9, 15, 16, 25, 38 and 39 note that the reference USP 6discloses reducing concentration of organic materials with substituted cyclodextrin compound in polyester packaging materials. Polyethylene terephthalate (PET) packaging materials in the form of film, shaped containers, bottles, etc. have been known. Further, rigid, or semi-rigid, thermoplastic beverage containers have been made from preforms that

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are in turn molded from pellets or chips etc.

With regard to claims 3, 4, 5, 6, 7, 17, 18, 19, 20, 21, 26 - 30, 40 note that the reference states that various catalysts are known in the art to be suitable for the transesterification step. Salts of organic acids with bivalent metals (e.g. manganese, zinc, cobalt or calcium acetate) are preferably used as--direct esterification or trans-esterification catalysts, which in themselves also catalyze the polycondensation reaction. Antimony, germanium and titanium compounds are preferably used as polycondensate catalysts. Catalysts that may be used include organic and inorganic compounds of one or more metals alone or in combination with the above-described antimony, also including germanium and titanium. Suitable forms of antimony can be used, including inorganic antimony oxides, and organic compounds of antimony, such as antimony acetate, antimony oxalate, antimony glycoxide, antimony butoxide, and antimony dibutoxide. Antimony-containing compounds are currently in widespread commercial use as catalysts that provide a desirable combination of high reaction rate and low color formation. Titanium may be chosen from the group consisting of the following organic titanates and titanium complexes: titanium oxalate, titanium acetate, titanium butylate, titanium benzoate, titanium isopropylate, and potassium titanyl oxalate.

With regard to claim 31 note that the reference states that the extractable materials can comprise reaction byproduct materials including formaldehyde, formic acid, acetaldehyde, acetic acid, 1,4-dioxane, 2-methyl-1,3-dioxolane, and

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other organic reactive aldehyde, ketone and acid products.

With regard to the reheating step of claims 10, 11, 24, 32, 33, 34, and 35 note that the reference discloses that the condensation/polymerization reaction occurs between the dicarboxylic acid, or a dimethyl ester thereof and the glycol material in a heat driven metal catalyzed reaction that releases water or methanol as a reaction by-product leaving, a high molecular weight polyester material. Bulk resin is formed as a convenient flake, chip or pellet adapted for future thermal processing. Bulk polyester material can be injection blow molded directly into a container. Alternately, the polyester can be formed into an intermediate preform that can then be introduced into a blow-molding machine. The polyester is heated (which is the second heating) and blown to an appropriate shape and volume for a beverage container. The preform can be a single layer material, a bilayer or a multilayer preform.

With regard to claims 12, 35 the reference notes that at the temperature of the melt extrusion, the cyclodextrin compound reacts with, complexes or associates with the metallic catalyst residues and prevents the production of catalytically generated reactive organic compounds, including aldehyde materials such as acetaldehyde. The cyclodextrin compound can also react with and scavenge volatile reactive materials such as acetaldehyde formed during the melt process which denotes that the temperature is sufficient to cause the diffusion of the acetaldehyde. Further, note that the reference also discloses as a third aspect of the invention a thermoplastic preform having within the polymer matrix, an effective amount of the cyclodextrin compound for reducing volatile

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organic materials such as acetaldehyde produced during injection molding and for introducing a barrier property into the thermoplastic polymer.

With regard to claims 13, 14, 22,23, 36, and 37 the reference discloses that the effective amount of a substituted cyclodextrin for aldehyde suppression rangess from about 100ppm to 1,400 ppm based on the polymer composton as a whole preferably 350 ppm to 900 ppm. The principle mechanistic action of the substituted cyclodextrin material is a coordination complex of the metallic catalysyt where more than one metal ion is bound per cyclodextrin.

Thus, in view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone


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number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (**571-272-1700**).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb


Examiner Terressa Boykin
Primary Examiner
Art Unit 1711